

NEW MUSCOID DIPTERA MAINLY FROM CALIFORNIA¹

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The species and genera described in this paper are based upon specimens received from several sources, all cited under the following descriptions. I am indebted to the collectors of this material for the privilege of studying the same.

***Euphyto rixosa* Reinhard, new species**

Easily distinguished from all other known members of the genus by the strongly fasciate and red-tipped abdomen.

Male.—Head pollen subsilvery; front gradually widening upwards and at vertex 0.43 of head width; frontal bristles weak, in two rows converging and stopping at antennal base; one reclinate and two proclinate fronto-orbital bristles; ocellars well developed, proclinate; verticals two pairs; frontalia densely pollinose, much wider than one parafrontal on entire length; parafacial bare, three-fourths as wide as clypeus; latter well depressed or dished at middle; epistoma strongly narrowed from clypeus and in forward sloping plane of same; vibrissae weak, set distinctly above epistoma; facialia bare; antenna three-fifths length of face, black third segment a trifle longer than second, latter faintly reddish near apex; arista shorter than antenna, black, bare, thickened on basal two-fifths, proximal segments small; eye bare, large reaching to vibrissal level; haustellum rather slender but not equal to eye length; palpus long and slender, deep brownish to black; cheek about one-fourth eye length; occiput sparsely beset with black hairs. *Thorax* with heavy lusterless gray pollen, scutellum concolorous, notal vittae obsolete. Chaetotaxy: acrostichal 0, 1; dorsocentral 3, 3; intraalar 2; supraalar 2; postalar 2; notopleural 2; presutural 1 (outer); posthumeral 1; humeral 2; pteropleural 0; sternopleural 2; scutellum with 3 lateral (hindmost pair approximated near apex) and 1 discal pair; prosternum, propleuron and postnotal slope bare. Legs largely black, knees and tarsi somewhat reddish, weakly bristled; claws and pulvilli somewhat longer than apical tarsal segment. Wing hyaline, veins yellow; third vein usually setulose half-way to small cross vein; cubitulus angular, bearing a short fold; first posterior cell open well before wing tip; costal spine vestigial; epaulet and subepaulet pale reddish; calypter opaque white; longer than broad. *Abdomen* rather slender, pointed apically, subshiny black the apex distinctly red, last three segments with sharply defined pale gray pollen bands on basal half, which are more or less interrupted along median line; segments three and four each bearing a marginal row of weak bristles; hypopygium red; forceps united, rather short, thin and barely bowed in profile and in rear view tapered from base to a blunt tip, which is slightly notched at middle; fifth sternite with a

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moderate U-shaped apical excision, lobes rather small, black, with one or two good-sized bristly hairs on apical margin; sternites exposed.

Female.—Build stouter and more compact than male; front at vertex 0.46 of head width, widening slightly from middle to antennal base; fore tarsi rather broad and somewhat flattened; claws and pulvilli short; abdomen stouter and thicker than in male; genitalia red, caudoventral, retracted within tip of abdomen, orifice slitlike, with a marginal row of short black hairs. Length, male 5.5 mm.; female, 6–7.5 mm.

Holotype male and allotype female (in Calif. Acad. Sci., Ent.) NILAND, IMPERIAL COUNTY, CALIFORNIA, April 25, 1949, at light, (L. W. Quate). Paratypes: 2 females, Furnace Creek, Death Valley, Calif., April 1, 1951 (P. D. Hurd and J. W. MacSwain); and 1 female, Salton Sea Beach, Imperial County, Calif., April 22, 1951 (E. I. Schlinger).

***Phryxe tolucana* Reinhard, new species**

Similar to the genotype, *vulgaris*, but the front is decidedly more prominent and the apical scutellars are directed backwards.

Male.—Front at vertex 0.35 of head width, hardly widening on upper half then gradually so into facial angle; parafrontal cinereous pollinose to vertex on black background, sparsely haired on outer margin; frontalia dark brown, much narrower than parafrontal; outer verticals divaricate, nearly as strong as inner pair; orbitals absent; ocellars large, proclinate; frontals about twelve in number, with anterior four or five bristles below antennal base; antenna black, second segment about two-fifths length of third, which is rather slender and reaches to oral margin; arista black, bare, thickened on basal two-fifths or less, second segment a little longer than wide; face plumbeous, parafacial bare, narrowed below; vibrissae on oral margin; facialia bristled on about lower fourth; eye sparsely but distinctly hairy, descending to vibrissal level; proboscis shorter than head height; palpus black, spatulate; cheek blackish, thinly pollinose, one-fourth eye length; occiput cinereous, bearing a vestiture of black hairs on outer margin and finer pale pile medianly about neck. *Thorax* and scutellum black, dusted with gray pollen, dorsal vittae not well defined. Chaetotaxy: acrostichal 3, 3; dorsocentral 3, 4; intraalar 3; supraalar 3; presutural 2; humeral 3–4; posthumeral 2; sternopleural 2, 1; pteropleural 1 (small); scutellum with 3 lateral, 1 decussate apical and 1 appressed discal pair; prosternum setose; propleuron and postnotal slope bare. Legs black; hind tibia not ciliate; fore tibia with two median posterolateral bristles; claws and pulvilli a little shorter than last tarsal segment. Wing gray hyaline with a yellow tinge costobasally; second vein with two setulae near base; first posterior cell open well before wing tip; calypter opaque white tinged with yellow. *Abdomen* wholly black in ground color, with gray pollen above which appears dense on only the basal fifth to fourth of segments two and three; latter with erect discals but the hairs depressed; one pair of median marginals on segments one and two and a marginal row on three and four, besides numerous discals on latter; genitalia black; forceps short and

united to middle, grooved behind and tapering to a blunt forward bowed tip; accessory process more shiny, barely half as long or as wide as forceps in profile.

Female.—As described for male but the second antennal segment is fully three-fifths the length of third; orbitals present; palpus much more thickened on apical half; claws and pulvilli shorter; vertex 0.39 of head width; genitalia retracted without piercer. Length, 5.5–7.5 mm.

Holotype male and allotype female (in Calif. Acad. Sci., Ent.) NEVADO TOLUCA, MEXICO, ELEVATION 11,300 FEET, July 11, 1951 (P. D. Hurd). Paratypes: 12 males, same data as type; 1 female, 20 mi. N. Toluca, Mexico, 8,000 feet, July 31, 1954 (Univ. Kansas Mex. Exped.).

***Calyptosomus* Reinhard, new genus**

Similar to *Leucostoma* in having enlarged calypters, first posterior cell long petiolate and ocellars reclinate but at once distinguished in having the parafacials distinctly clothed throughout with long, coarse black hairs. Also, in the present genus the eyes are noticeably smaller and do not descend so far below the vibrissal level; cheek one-third eye height; antennal axis a little beneath eye middle; parafacial hardly at all narrowed downward and exceeding one-half clypeal width; petiole of first posterior cell reaching costa about length of small cross vein before exact wing tip.

Genotype: *Calyptosomus dapsilis* Reinhard, new species.

***Calyptosomus dapsilis* Reinhard, new species**

Male.—Front at vertex 0.17 of head width, slightly narrowed before triangle thence strongly divergent to base of antenna; parafrontal and parafacial gray pollinose, beset with numerous erect hairs; frontal vitta velvety black, equal to or wider than parafrontal on upper half; frontals rather weak, one or two bristles below antennal base; verticals hairlike, outer pair barely differentiated; facialia rather broad and flattened, practically bare; vibrissae slightly above oral margin; antenna rather small, blackish, third segment rounded apically, barely longer than second, arista black, bare, thickened and tapered on about basal fourth; eye bare; proboscis moderately slender but hardly equal head height; palpus brownish, with tip hardly at all thickened and sometimes paler or yellowish; cheek gray, black-haired; back of head lightly gray pollinose on dark background. *Thorax* and scutellum black and moderately shining, weakly bristled as follows: acrostichal 1,1 (none near suture); dorsocentral 2,3; intraalar 2; postalar 2; presutural vestigial; humeral 2–4; pteropleural 1 (small); sternopleural 3; scutellum with 2 lateral and 1 equally strong decussate apical, no differentiated discals; prosternum, propleuron and postnotal slope bare. Legs black; hind tibia with a row of widely spaced uneven bristles on outer posterior edge; claws and pulvilli subequal length of last tarsal seg-

ment. Wing subhyaline, extending beyond apex of abdomen; third vein bearing a single small hair near base; hind cross vein about midway between small cross vein and cubitulus; latter without a stump or fold; costal spine vestigial; hind lobe of calypter noticeably widened, opaque white. *Abdomen* narrower and slightly longer than thorax, shining black, last three segments lightly dusted with gray pollen; hairs on upper surface rather fine and erect but not very long; first segment with one pair of median marginals and a marginal row on each of last three; no differentiated discals; genitalia black, retracted, forceps short, clawlike; sternites covered.

Female.—Front at vertex 0.32 of head width, gradually widening forward into facial angle; parafrontal with only scattered small setae; parafacial not so thickly haired as in male; two proclinate and one reclinate orbital bristles; inner and outer verticals well developed; abdomen wholly shining black, without a trace of pollen, anal segment considerably shorter than preceding one; arms of forceps tapering and curved inward apically; claws and pulvilli shorter than last tarsal segment. Length, 3.5–4.5 mm.

Holotype male, RED BLUFF, CALIFORNIA, May 22, 1952 (E. I. Schlinger) and allotype female, Davis, California, September 13, 1952 (E. I. Schlinger) in California Academy of Sciences, Entomology. Paratypes: 1 male, Vacaville, California, September 30, 1950 (A. T. McClay), 1 male, San Joaquin County, California, October 29, 1932; 3 males, Amarillo, April 3, 1929 and Mason, April 13, 1952; 1 male, Oklahoma, Beaver County, August 27, 1940; 2 males, Arizona, 10 mi. E. Nogales, March 26, 1955; Butler-Werner and Elfrida, November 5, 1955, G. D. Butler, swept alfalfa and 1 female, Meade, Kans., July 10, 1954, W. L. Downes.

***Phorocera arnaudi* Reinhard, new species**

Traces to *claripennis* in Aldrich and Webber's key (Proc. U. S. N. N., 63, 1924, 45–47), from which it differs mainly in structure of the genitalia; other minor differences are listed below.

Male.—Front at vertex 0.31 of head width hardly widening on upper third thence evenly so downward into facial angle; parafrontal, parafacial, cheek and posterior orbit gray pollinose on dark ground color; frontals in a single row, three bristles beneath antennal base, uppermost two stoutish and reclinate; outer verticals and fronto orbitals not developed; ocellars strong, proclinate; clypeus moderately depressed, epistoma as wide as latter, short; facial ridge bristled to upper fourth or about to level of lowermost frontal; vibrissae on oral margin; antenna about as long as face, black, second segment more or less reddish, about one-fourth as long as third, which is ordinary in width; arista bare, moderately thickened on proximal two-fifths, basal segments short; parafacial bare on entire length, slightly narrowed downward; proboscis short; palpus yellow; cheek barely one-fifth of eye height, clothed with black hairs; eye pilose, reaching nearly to vibrissal level; back of head gray pollinose, bearing a vestiture of wholly

pale or whitish hairs. *Thorax* black rather densely gray pollinose, mesonotum with four velvety black vittae before the suture and five behind, median one only attaining base of the scutellum; later sometimes with apex slightly reddish; acrostichal 3,3; dorsocentral 3,4; presutural 2; sternopleural 3; pteropleural 1 (small); scutellum with 3 lateral, 1 smaller decussate suberect apical pair besides numerous erect bristly hairs over most of upper surface; prosternum setose. *Legs* black, rather slender but not very long; mid tibia with two anterodorsal bristles; hind tibia unevenly ciliate on outer hind side; claws and pulvilli moderately elongated. *Wing* hyaline; first posterior cell open far before extreme wing tip; cubitus obtuse, bearing a distinct fold in membrane; third vein setulose half-way or more to small cross vein; last section of fifth vein almost to fully one-half length of preceding section; costal spine vestigial; calypter white; epaulet black. *Abdomen* tapered to apex, wholly black in ground color, basal half of last three segments gray pollinose above, and the hind margins polished or shining; two basal segments each with one pair of median marginals, third bearing a complete marginal row; anal segment with a marginal and a discal row behind middle; intermediate segments without discals; genital segments blackish; forceps united, tapering evenly from base to tip as viewed from behind; posterior surface flattened and thickly clothed with fine black hairs except near apex, beak shiny, acute and slightly bowed forward; accessory process broad and shiny on basal part, narrowed before tip and thence widened into a small lobe, which is beset with fine black hairs on outer side; sternites covered.

Female.—Front wider, at vertex 0.37 and at antennal base 0.46 of head width; third antennal segment three times longer than second, which is decidedly more reddish than in male; outer verticals well developed; one reclinate and two strong proclinate fronto orbitals; claws and pulvilli shorter than apical tarsal segment. Length, 6.5–8 mm.

Holotype male and allotype female, CHINO CANYON, PALM SPRINGS, CALIFORNIA, December 22 and 23, 1950 (P. H. Arnaud) for whom the species is named. Paratypes: 2 males, same data as type, except dated December 25 and 27, 1950; 1 male, Hallelujah Junction, Lassen County, California, July 7, 1949 (P. D. Hurd); 1 male, "Utah, July, 1938", and 1 male, Haigler, Nebraska, August 17, 1909 (C. H. Gable);

Phorocera clunalis Reinhard, new species

As described for the preceding species except as follows:

Male.—Front at vertex 0.30 of head width; antenna a little shorter than face, third segment black with reddish tinge on narrow base, slightly exceeding three times length of second, latter reddish; arista thickened on proximal half or more; cheek one-fourth eye height; scutellum reddish except on basal margin; abdomen black with sides broadly reddish, gray pollinose above with a narrow but distinct dark median vitta visible in most views, hind margin of last three segments subpollinose; genital forceps moderately long, united, transversely convex on hind side, tapering from

base to apex in both rear and profile view; beak hardly bowed, subacute. Length, 9.5–11.5 mm. Female unknown.

Holotype male, MISSION, TEXAS, June 29, 1947 and 1 paratype, same data as type, donated by Judson Maguire.

Asseclamyia Reinhard, new genus

Traces to Germariini in Townsend's Manual of Myiology tables but differs markedly from all included forms. Frontal profile subhorizontal and greatly produced, parafacial at antennal base obviously exceeding eye width; antennal axis near eye middle and about one-half longer than oral; vibrissae strong, decussate, nearly length of second antennal segment above oral margin; clypeus narrow and well sunk, slightly arched on median line; facialia subvertical, upper half or more overlapped by parafacial, the exposed lower part beset with small bristly hairs; epistoma hardly narrowed and in clypeal warp, produced and widened downward; parafacial uncommonly broad, twice clypeal width, setose from about middle upwards blending with parafrontal vestiture; vertex 0.43 of head width, gradually widening forward into facial angle; inner verticals not very long but quite distinct; no orbitals; ocellar bristles proclinate; main row of frontals not very stout, lower two bristles divergent on parafacial below antennal base; parafrontal beset with numerous bristles on inner margin and finer hairs on outer along eye margin; antenna about two-thirds as long as face, first segment of moderate length, second one-third as long as third; arista short and bare, proximal segments small; proboscis shorter than head height, haustellum corneous, quite slender and tapering distally, labella smallish but fleshy; palpus slender and barely thickened apically; eye bare, not reaching vibrissal level; cheek fully two-thirds eye height. Thoracic chaetotaxy: acrostichal 3,3; dorsocentral 3,4; intraalar 3; supraalar 3; presutural 2; notopleural 2; posthumeral 2; humeral 3–4; postalar 3; sternopleural 3–5 (normally 4); pteropleural 1 (weak); scutellum with 3 lateral, 1 weak decussate apical and 1 or 2 appressed discal pairs; prosternum setose, propleuron and postnotal slope bare; infrascutellum normally developed. Wing reaching slightly beyond apex of abdomen; first vein bare, third usually with one sometimes two bristlets near base; first posterior cell narrowly open well before wing tip; cubitulus obtusely rounded, without stump or fold; costal spine minute. Legs moderately long but not slender; claws and pulvilli elongate. Abdomen without

discals on intermediate segments; a pair of median marginals on first two and a marginal row on last two segments, besides numerous erect discals on latter; sternites exposed and weakly bristled.

Genotype: *Asseclamyia sphenofrons* Reinhard, new species.

***Asseclamyia sphenofrons* Reinhard, new species**

Male.—Parafrontal, parafacial and cheek gray pollinose on dark background, broad cheek groove red, this color extending upwards on narrow inner margin of parafacial; frontalia opaque black, striate, and widening toward vertex; antenna black, basal segments at times faintly reddish; arista black, shorter than antenna, thickened and tapering on proximal third; palpus brown, somewhat paler near tip; occiput flattened, gray pollinose, clothed with fine pale hairs intermixed with coarser black ones along upper margin. *Thorax* black, with moderately dense gray pollen, dorsal vittae not well defined; scutellum largely red in ground color, lightly dusted with paler or whitish pollen. Wing gray hyaline; veins dark brown; epaulet and subepaulet black; hind lobe of calypter about as wide as long, opaque white. Legs subshining black; hind tibia subciliate. *Abdomen* red in ground color, darker along median line including apex, last three segments extensively gray pollinose above, narrow hind margin of each subshining in direct view; segments three and four bearing a ventral patch of dense appressed black hairs on either side of a shiny black median vitta, which extends to bas of venter; anal orifice large; genitalia wholly retracted. Female unknown. Length, 9.5–11 mm.

Holotype male (in Calif. Acad. Sci., Ent.) TWENTY-NINE PALMS, SAN BERNARDINO COUNTY, CALIFORNIA, March 29, 1952 (R. C. Bechtel). Paratypes: 3 males, same data as type except one dated March 30, 1952 (E. I. Schlinger); and 1 male, Putah Canyon, Yolo County, California, April 15, 1952 (W. J. Wall).

***Peleteria aclista* Reinhard, new species**

Readily distinguished from allied species by the absence of pollen and discal bristles on the intermediate abdominal segments and in genitalic features as mentioned below.

Male.—Head pale pollinose on yellowish background, parafrontals darker or blackish near vertex; frontalia pale reddish yellow and almost equal to parafrontal width; vertex 0.38 of head width; three or four proclinate and one reclinate orbital bristles; outer verticals about as strong as inner; ocellars absent; frontals in two rows, the inner or main row diverging widely on parafacial below antennal base; parafacial beset with black hairs and two or three bristles on lower outer extremity; antenna wholly black, third segment broadly rounded on anterior margin, about three-fourths as long as second; arista black, with moderately elongate subequal basal segments; palpus yellow, very long and slender with the extreme tip noticeably flattened and widened; proboscis slender, haustellum equal head height; cheek about two-thirds eye height, clothed with long black hairs. *Thorax* black, scutellum and posterior calli yellow in ground color, meso-

notum with thin gray pollen which shows four narrow dark vittae in a flat rear view, the inner pair stopping shortly behind suture and outer ones broadly interrupted at same; acrostichal 3,4; dorsocentral 4,4; presutural 2; sternopleural 3; pteropleural 2 (large); scutellum with 4 lateral, 1 pre-apical, 1 decussate apical and numerous suberect discal bristles. Legs black, tibiae more or less reddish, strongly bristled; claws and pulvilli not much longer than apical tarsal segment. Wing gray hyaline tinged with yellow basally; veins including costa yellowish; apical cell narrowly open far before wing tip; apical and hind cross veins in same plane and very oblique, latter joining fourth vein much nearer to cubitulus than small cross vein; calypter opaque yellowish white; epaulet yellow. *Abdomen* reddish yellow fourth segment sharply contrasting black in general aspect, entire upper surface devoid of pollen but the surface not shiny; second segment with one pair of median marginals, third with a complete marginal row and the fourth beset with numerous bristles on apical half above; genitalia blackish, posterior forceps grooved along median line behind, bowed forward and suddenly narrowed near apical third terminating in a short median beak; fifth sternite nearly as in *iterans*; sternites two to four yellow, exposed apically and beset with black hairs and bristles.

Female.—Vertex 0.42 of the head width; second antennal segment slightly reddish at extreme apex; otherwise except for sexual differences similar to male. Length, 10–12 mm.

Holotype male and allotype female, Mt. POPOCATEPETL, 3000 m. MEXICO, November 27, 1951 (W. G. Downs). Paratypes: 2 males, Nevado Toluca, Mexico, Mexico, 11,300 ft., July 11, 1951 (P. D. Hurd) in the California Academy of Sciences, Entomology; 2 males, north slope, Popocatepetl, Mex., Mexico, 1,300 ft., VII-11-54 (Univ. Kansas Exped.); and 1 male, west slope Cortes Pass, Mexico, 11,500 feet, VII-11-54 (Univ. Kansas Mex. Exped.).

DESIGNATION OF A TYPE SPECIES FOR THE GENUS EOPARARGYRACTIS LANGE

(Lepidoptera: Pyralidae, Nymphulinae)

In a recent revision of the aquatic moths¹ the genus *Eoparargyractis* was proposed to receive three known North American species, *E. plevie* (Dyar), *E. irroratalis* (Dyar), and *E. floridalis* Lange. Inasmuch as a type species was not selected I would like to designate the following: *Type Species: Elophila plevie* Dyar, 1917.²—W. H. LANGE, JR., *University of California, Davis*.

¹ W. Harry Lange, Jr., 1956, A generic revision of the aquatic moths of North America: (Lepidoptera: Pyralidae, Nymphulinae). The Wasmann Jour. of Biology. 14(1):125.

² H. G. Dyar, 1917, Notes on North American Nymphulinae. Insec. Inscit. Menst., 5(4-6):78.